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REMARKS

The Examiner rejected claim 33 under 35 U.S.C. § 112, second paragraph as being indefinite, noting that the terms “said birefringence” and “said pixels” each lacked antecedent basis. Claim 33 has been accordingly amended to claim the “method of claim 17 wherein the birefringence of each of said locations is fixed.”

The Examiner rejected claims 1, 2, 4, 15, 17-19, 21, and 29 under 35 U.S.C. § 102(b) as being anticipated by Chigrinov, et al., U.S. Patent No. 5,784,139 (hereinafter Chigrinov). Chigrinov discloses a LCD capable of simultaneously displaying a left image and a right image on a display. These images are oppositely polarized, i.e. the left image is polarized ninety degrees from the right image. The display includes a polarizer that alternates the polarity of adjoining pixels between the left image polarity and the right image polarity so that the each image will only be displayed on pixels with a matching polarity.

Independent claim 1 has been amended to claim “a projection display system comprising. . . at least one liquid crystal panel for generating an image, and which together with said polarizer, acts to polarize light from said light source generally into a uniaxial orientation . . . a polarization compensator having a plurality of light transmitting regions each having an incident face for receiving incident light and each having a respective birefringence, where said birefringence of each respective region is based on the variance of the polarization of said incident light on the incident face of said respective region from said uniaxial orientation, where said birefringence reduces said variance, and where said birefringence of at least one of said regions is different than said birefringence of another of said regions.”

Independent claim 1, as amended is patentably distinguishable over Chigrinov, which does not disclose a polarization compensator having regions of differing birefringence where the “birefringence of each respective region is based on the variance of the polarization of said incident light on the incident face of said respective region from said uniaxial orientation.” Rather, the LCD display of Chigrinov merely includes a polarizer where the birefringence of each regions is calculated so that the polarity of adjacent regions alternates by ninety degrees. Further, Chigrinov does not disclose a polarization compensator that reduces a variance, from a

uniaxial orientation, of the polarization of incident light on the incident face of a respective region on the polarization compensator.

Dependent claims 2-16 depend from independent claim 1 and are patentably distinguishable over Chigrinov for the same reasons as is independent claim 1.

Independent claim 17 has been amended to recite the limitations of “determining a variance, from uniaxial orientation, of the polarization of light at a first location and a second location of said image . . . reducing said variance at said first and second locations where said reduction at said first location is different than said reduction at said second location.” Chigrinov discloses neither of these limitations, hence independent claim 17 is patentably distinguishable over Chigrinov.

Dependent claims 18-33 depend from independent claim 17 and are patentably distinguishable over Chigrinov for the same reasons as is independent claim 17.

The Examiner rejected claims 1, 3, 4, 7, 11, 15, 17, 18, 20, 21, 24, and 28 under 35 U.S.C. § 102(b) as being unpatentable over Iba, U.S. Patent No. 5,854,665. Iba discloses a LCD having an intermediate layer comprising a planar distribution phase plate (see FIGS. 12 and 14, elements 40 and 55, respectively). The planar distribution phase plate has a continuous phase distribution that varies concentrically from its center. (See col. 11, line 66 - col. 12, line 7). This phase distribution is achieved by either stretching a sheet of transparent plastic material (col. 12, lines 14-20), photolithography (col. 12, lines 20-22) or by layering successively smaller sizes of retardation films (col. 12, lines 27-34.)

Independent claim 1 has been amended to claim “a projection display system comprising. . . at least one liquid crystal panel for generating an image, and which together with said polarizer, acts to polarize light from said light source generally into a uniaxial orientation . . . a polarization compensator having a plurality of light transmitting regions each having an incident face for receiving incident light and each having a respective birefringence, where said birefringence of each respective region is based on the variance of the polarization of said incident light on the incident face of said respective region from said uniaxial orientation, where said birefringence reduces said variance, and where said birefringence of at least one of said regions is different than said birefringence of another of said regions.”

Independent claim 1, as amended is patentably distinguishable over Iba, which does not disclose a polarization compensator having regions of differing birefringence where the “birefringence of each respective region is based on the variance of the polarization of said incident light on the incident face of said respective region from said uniaxial orientation.” Rather, the LCD display of Iba merely includes a phase plate where the birefringence of the phase plate varies radially from an arbitrarily selected center birefringence. Further, Iba does not disclose a polarization compensator that reduces a variance, from a uniaxial orientation, of the polarization of incident light on the incident face of a respective region on the polarization compensator.

Dependent claims 2-16 depend from independent claim 1 and are patentably distinguishable over Iba for the same reasons as is independent claim 1.

Independent claim 17 has been amended to recite the limitations of “determining a variance, from uniaxial orientation, of the polarization of light at a first location and a second location of said image . . . reducing said variance at said first and second locations where said reduction at said first location is different than said reduction at said second location.” Iba discloses neither of these limitations, hence independent claim 17 is patentably distinguishable over Iba.

Dependent claims 18-33 depend from independent claim 17 and are patentably distinguishable over Iba for the same reasons as is independent claim 17.

The Examiner rejected claims 3, 5-14, 16, 20, 22-28, and 30-33 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Chigrinov in view of Iba, Yamamoto et al., Kizaki, et al., Ferguson, and Ootaki.

Dependent claims 3, 5-14, and 16 depend from independent claim 1 which, as amended includes the limitations of a plurality of light transmitting regions each having an incident face for receiving incident light and each having a respective birefringence, where said birefringence of each respective region is based on the variance of the polarization of said incident light on the incident face of said respective region from said uniaxial orientation, where said birefringence reduces said variance.

The suggested combination does not disclose these limitations.

Dependent claims 20, 22-28, and 30-33 depend from independent claim 17 which, as amended, includes the limitations of “determining a variance, from uniaxial orientation, of the polarization of light at a first location and a second location of said image . . . reducing said variance at said first and second locations where said reduction at said first location is different than said reduction at said second location.”

The suggested combination does not disclose these limitations.

Accordingly, claims 3, 5-14, 16, 20, 22-28, and 30-33 are patentably distinguishable over the combination of Chigrinov in view of Iba, Yamamoto et al., Kizaki, et al., Ferguson, and Ootaki, and should respectfully be allowed.

The Examiner rejected claims 2, 5, 6, 8-10, 12-14, 16, 19, 22, 23, 25-27, and 29-33 under 35 U.S.C. § 102(a) as being unpatentable over the combination of Iba in view of Chigrinov, Yamamoto et al., Kizaki, et al., Ferguson, and Ootaki.

Dependent claims 2, 5, 6, 8-10, 12-14, and 16 depend from independent claim 1 which, as amended, includes the limitations of a plurality of light transmitting regions each having an incident face for receiving incident light and each having a respective birefringence, where said birefringence of each respective region is based on the variance of the polarization of said incident light on the incident face of said respective region from said uniaxial orientation, where said birefringence reduces said variance.

The suggested combination does not disclose these limitations. Furthermore, the applicant notes that Iba discloses a LCD display that includes a phase plate with a phase distribution that varies continuously in a radial direction from the center in order to achieve certain desired effects, such as image scaling (see col. 11, lines 33-36) and contrast that is independent of the viewing angle (see col. 11, lines 7-14). The polarization compensator claimed in independent claim 1 would interfere with the phase distribution plate of Iba because that phase plate requires a continuous distribution in birefringence while the claimed polarization compensator adjusts variances in polarization that occur randomly. Therefore, Iba teaches away from the claimed invention and cannot be combined with any reference to form a proper rejection under 35 U.S.C. § 103(a).

Dependent claims 19, 22, 23, 25-27, and 29-33 depend from independent claim 17 which, as amended, includes the limitations of “determining a variance, from a uniaxial orientation, of the polarization of light at a first location and a second location of said image . . . reducing said variance at said first and second locations where said reduction at said first location is different than said reduction at said second location.”

The suggested combination does not disclose these limitations. Furthermore, the applicant notes that Iba discloses a LCD display that includes a phase plate with a phase distribution that varies continuously in a radial direction from the center in order to achieve certain desired effects, such as image scaling (see col. 11, lines 33-36) and contrast that is independent of the viewing angle (see col. 11, lines 7-14). The method claimed in independent claim 17 would interfere with the phase distribution plate of Iba because that phase plate requires a continuous distribution in birefringence while the claimed method reduces variances in polarization that occur randomly. Therefore, Iba teaches away from the claimed method and cannot be combined with any reference to form a proper rejection under 35 U.S.C. § 103(a).

Accordingly, claims 2, 5, 6, 8-10, 12-14, 16, 19, 22, 23, 25-27, and 29-33 are patentably distinguishable over the combination of Iba in view of Chigrinov, Yamamoto et al., Kizaki, et al., Ferguson, and Ootaki, and should respectfully be allowed.

In view of the foregoing amendments and remarks, reconsideration and allowance are respectfully requested.

Respectfully submitted,



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